

Journal of Plant Research

Formerly THE BOTANICAL MAGAZINE, TOKYO

Vol. 110 (1997)

Numbers 1097–1100, Pages 1–510

Editor-in-Chief

Masamitsu WADA: Department of Biology, Faculty of Science, Tokyo Metropolitan University,
Minami-Ohsawa, Tokyo, 192-03 Japan

Editors

Naoki KACHI: Department of Biology, Faculty of Science, Tokyo Metropolitan University,
Minami-Ohsawa, Tokyo, 192-03 Japan

Yoshibumi KOMEDA: Division of Biological Sciences, Graduate School of Science, Hokkaido
University, Kita-10, Nishi-8, Kita-ku, Hokkaido, 060 Japan

Noriaki MURAKAMI: Department of Biology, Graduate School of Science, Kyoto University,
Kitashirakawa-Oiwake-cho, Sakyou-ku, Kyoto, 606-01 Japan

Editorial Board

Frank W EWERS Michigan State University

Ikuko HARA-NISHIMURA National Institute for
Basic Biology

Mitsuyasu HASEBE National Institute for Basic
Biology

Christopher HAUFLE University of Kansas

Takeo HORIGUCHI Hokkaido University

Mike J HUTCHINGS University of Sussex

Mari IWAYA-INOUE Kyushu University

Hironao KATAOKA Tohoku University

Takayoshi KOIKE Tokyo University of Agriculture
and Technology

J Clark LAGARIAS University of California

Masayuki MAKI Fukuoka University of Education

Akira NAGATANI The University of Tokyo

Eric T NILSEN Virginia Polytechnic Institute and
State University

Harufumi NISHIDA Chuo University

Eisho NISHINO Chiba University

Kazuhiko NISHITANI Tohoku University

Jeremy ROBERTS University of Nottingham

Satoki SAKAI Tohoku University

Shingo TAKAGI Osaka University

Masamichi TAKAHASHI Kagawa University

Masayuki TAKAMIYA Kumamoto University

Akio TAKENAKA National Institute for Environ-
mental Studies


Ichiro TANAKA Yokohama City University

Izumi WASHITANI University of Tsukuba

Yasuyuki WATANO Kanazawa University

Susan M WICK University of Minnesota

The Botanical Society of Japan



Digitized by the Internet Archive
in 2023 with funding from
Kahle/Austin Foundation

CONTENTS

Journal of Plant Research

(Formerly : THE BOTANICAL MAGAZINE, TOKYO)

Vol. 110

Number 1097, March 1997

ORIGINAL ARTICLES

- Koitaishi, R., Suzuki, T., Kawazu, T., Sakai, A., Kuroiwa, H. and Kuroiwa, T. : 1, 8-Cineole Inhibits Root Growth and DNA Synthesis in the Root Apical Meristem of *Brassica campestris* L. 1
- Nakashizuka, T., Takahashi, Y. and Kawaguchi, H. : Production-Dependent Reproductive Allocation of a Tall Tree Species *Quercus serrata* 7
- Tsukaya, H., Yokoyama, J., Ikeda, H., Kuroiwa, H., Kuroiwa, T. and Iwatsuki, K. : Morphological, Physiological and Molecular Genetic Characterization of *Arabidopsis himalaica*, with Reference to *A. thaliana* 15
- Mimura, T., Mimura, M., Washitani-Nemoto, S., Sakano, K., Shimmen, T. and Siripatanadilok, S. : Efficient Callus Initiation from Leaf of Mangrove Plant, *Bruguiera sexangula* in Amino Acid Medium : Effect of NaCl on Callus Initiation 25
- Mimura, T., Mimura, M., Washitani-Nemoto, S. and Siripatanadilok, S. : NaCl-Dependent Growth, Ion Content and Regeneration of Calluses Initiated from the Mangrove Plant, *Bruguiera sexangula* 31
- Aloni, R. and Peterson, C.A. : Auxin Promotes Dormancy Callose Removal from the Phloem of *Magnolia kobus* and Callose Accumulation and Earlywood Vessel Differentiation in *Quercus robur* 37
- Sugiyama, M. : Floral Anatomy of *Camellia japonica* (Theaceae) 45
- Mauseth, J.D. and Landrum, J.V. : Relictual Vegetative Anatomical Characters in Cactaceae: the Genus *Pereskia* 55
- Komori, K., Maruo, F., Morio, T., Urushihara, H. and Tanaka, Y. : Localization of a DNA Topoisomerase II to Mitochondria in *Dictyostelium discoideum* : Deletion Mutant Analysis and Mitochondrial Targeting Signal Presequence 65
- Lee, S., Lee, J. and Kim, S. : A New Species of *Adenophora* (Campanulaceae) from Korea 77

SHORT COMMUNICATION

- Arakane, T. and Maeda, Y. : Relevance of Histone H1 Kinase Activity to the G2/M Transition during the Cell Cycle of *Dictyostelium discoideum* 81
- Ueda, K., Hanyuda, T., Nakano, A., Shiuchi, T., Seo, A., Okubo, H. and Hotta, M. : Molecular Phylogenetic Position of Podostemaceae, a Marvelous Aquatic Flowering Plant Family 87

INVITED ARTICLE

- Brown, R.C. and Lemmon, B.E. : The Quadripolar Microtubule System in Lower Land Plants 93

JPR SYMPOSIUM

- Yamamoto, K.T. : Molecular Mechanism of Phytochrome Action 107
- Manabe, K. and Nakazawa, M. : The Structure and Function of Phytochrome A: the Roles of the Entire Molecule and of Its Various Parts 109
- Nagatani, A. : Spatial Distribution of Phytochromes 123
- Hiratsuka, K. and Chua, N.-H. : Light Regulated Transcription in Higher Plants 131
- Kerckhoffs, L.H.J. and Kendrick, R.E. : Photocontrol of Anthocyanin Biosynthesis in Tomato 141
- Shinomura, T. : Phytochrome Regulation of Seed Germination 151

Number 1098, June 1997

MINIREVIEW

- Takahashi, H. : Hydrotropism : the Current State of Our Knowledge 163

ORIGINAL ARTICLES

| | |
|--|-----|
| Ueda K., Kosuge, K. and Tobe, H. : A Molecular Phylogeny of Celtidaceae and Ulmaceae (Urticales) Based on <i>rbcl</i> Nucleotide Sequences | 171 |
| Yamada, T. and Suzuki, E. : Changes in Spatial Distribution during the Life History of a Tropical Tree, <i>Scaphium macropodum</i> (Sterculiaceae) in Borneo | 179 |
| Yu, Y.-L. and Lin, T.-Y. : Construction of Phylogenetic Tree for <i>Nicotiana</i> Species Based on RAPD Markers | 187 |
| Fujii, N., Ueda, K., Watano, Y. and Shimizu, T. : Intraspecific Sequence Variation of Chloroplast DNA in <i>Pedicularis chamissonis</i> Steven (Scrophulariaceae) and Geographic Structuring of the Japanese "Alpine" Plants | 195 |
| Kang, S.S. and Chung, M.G. : Genetic Variation and Population Structure in Korean Endemic Species: IV. <i>Hemerocallis hakuunensis</i> (Liliaceae) | 209 |
| Suyama, Y., Tsumura, Y. and Ohba, K. : A Cline of Allozyme Variation in <i>Abies mariesii</i> | 219 |
| Konuma, A. and Yahara, T. : Temporally Changing Male Reproductive Success and Resource Allocation Strategy in Protandrous <i>Heracleum lanatum</i> (Apiaceae) | 227 |
| Ohta, N., Sato, N., Ueda, K. and Kuroiwa, T. : Analysis of a Plastid Gene Cluster Reveals a Close Relationship between <i>Cyanidioschyzon</i> and <i>Cyanidium</i> | 235 |
| Ooi, K., Ohshita, S., Ishii, I. and Yahara, T. : Molecular Phylogeny of Geminivirus Infecting Wild Plants in Japan | 247 |
| Takaso, T. and Owens, J.N. : Pollen Movement in the Micropylar Canal of <i>Larix</i> and Its Simulation | 259 |
| Nakazawa, M., Wakabayashi, M., Ono, M. and Murata, J. : Molecular Phylogenetic Analysis of <i>Chrysosplenium</i> (Saxifragaceae) in Japan | 265 |
| Chang, C.-S. : Flavonoid Chemistry of <i>Weigela</i> (Caprifoliaceae) in Korea | 275 |
| Takahashi, M. : Fossil Spores and Pollen Grains of Cretaceous (Upper Campanian) from Sakhalin, Russia | 283 |

INVITED ARTICLE

| | |
|---|-----|
| Takagi, S. : Photoregulation of Cytoplasmic Streaming : Cell Biological Dissection of Signal Transduction Pathway | 299 |
|---|-----|

Number 1099, September 1997

ORIGINAL ARTICLES

| | |
|---|-----|
| Kataoka, T., Mori, M., Nakanishi, T.M., Matsumoto, S. and Uchiumi, A. : Highly Sensitive Analytical Method for Aluminum Movement in Soybean Root through Lumogallion Staining | 305 |
| Wakabayashi, K., Hoson, T. and Kamisaka, S. : Suppression of Cell Wall Stiffening along Coleoptiles of Wheat (<i>Triticum aestivum</i> L.) Seedlings Grown under Osmotic Stress Conditions | 311 |
| Tazawa, M. and Okazaki, Y. : Water Channel Dose Not Limit Evaporation of Water from Plant Cells | 317 |
| Oshima, K., Tang, Y. and Washitani, I. : Spatial and Seasonal Patterns of Microsite Light Availability in a Remnant Fragment of Deciduous Riparian Forest and Their Implication in the Conservation of <i>Arisaema heterophyllum</i> , a Threatened Plant Species | 321 |
| Tanaka, N., Setoguchi, H. and Murata, J. : Phylogeny of the Family Hydrocharitaceae Inferred from <i>rdcL</i> and <i>matK</i> Gene Sequence Data | 329 |
| Choi, B.-H. and Kim, J.-H. : ITS Sequences and Speciation on Far Eastern <i>Indigofera</i> (Leguminosae) | 339 |
| Darbelley, N., Razafindramboa, N., Chambost, J.-P. and Pavia, A. : Light Effects on α -amylase Activity and Carbohydrate Content in Relation to Lipid Mobilization during the Seedling Growth of Sunflower | 347 |
| Kim, J.-W., Yamauchi, D. and Minamikawa, T. : Expression of α -Amylase in Cultured Callus of French Bean | 357 |
| Kagawa, T., Lamparter, T., Hartmann, E. and Wada, M. : Phytochrome-Mediated Branch Formation in Protonemata of the Moss <i>Ceratodon purpureus</i> | 363 |
| Adachi, J., Watanabe, K., Fukui, K., Ohmido, N. and Kosuge, K. : Chromosomal Location and Reorganization of the 45S and 5S rDNA in the <i>Brachyscome lineariloba</i> Complex (Asteraceae) | 371 |

SHORT COMMUNICATION

| | |
|---|-----|
| Yoshitama, K., Oyamada, T. and Yahara, S. : Flavonoids in the Leaves of <i>Trillium undulatum</i> Willdenow | 379 |
| Uchiyama, S., Nagai, S. and Maruyama, K. : Lumazine-like Fluorescence in a Mass of Spores of the Cellular Smile Mold, <i>Dictyostelium discoideum</i> | 383 |

Number 1100, December 1997

ORIGINAL ARTICLES

| | |
|--|-----|
| Ishikawa, K., Kamada, H. and Harada, H. : Another Evidence for Inhibitory Effect of Auxin in Adventitious Bud Formation of Decapitated Flax (<i>Linum usitatissimum</i> L.) Seedlings | 387 |
|--|-----|

| | | | | | |
|---------------------------|-----|-----------------|-----|-----------------------|-----|
| V | | | | | |
| Very low fluence response | 151 | Water channels | 435 | Wound stimulus | 485 |
| | | Water potential | 163 | | |
| W | | <i>Weigela</i> | 275 | X | |
| Water channel | 317 | Wheat | 311 | Xylem differentiation | 37 |
| | | Wind dispersal | 179 | | |

| | | | | | |
|---------------------------------------|-----------------------------|-------------------------------------|--------------------|--|----------|
| HPLC analyses | 379 | N | <i>rbcl</i> | 15, 87, 171, 265 | |
| Hybridization | 275 | Nectar removal effects | 393 | <i>rbcl</i> gene sequences | 329 |
| Hydraulic conductivity | 435 | Nectar sugar composition | 393 | 5S rDNA | 371 |
| Hydrocharitaceae | 329 | Nectary structure | 393 | 45S rDNA | 371 |
| Hydrophily | 329 | <i>Neurospora</i> | 449 | Red light | 489 |
| Hydrotropism | 163 | <i>Nicotiana</i> | 187 | Regeneration | 31, 179 |
| Hypocotyl | 387 | <i>Nothofagus</i> | 469 | Repetitive action potentials | 483 |
| | | Nuclear ribosomal DNA | 339 | Reproductive allocation | 7 |
| I | | | | Retrotransposon | 495 |
| Image analysis | 417 | O | | Rhodophyta | 235 |
| Immunocytochemistry | 123 | Obdiplostemony | 45 | RNA-binding protein | 405 |
| <i>Indigofera</i> | 339 | Oceanic Islands | 455 | Root | 163 |
| Infiltration | 435 | <i>Oenothera hookeri</i> | 411 | Root cap | 163 |
| Internal transcribed spacer sequences | | Oilseed germination | 347 | | |
| | 339 | Onagraceae | 411 | S | |
| Intracellular distribution | 123 | Orchidaceae | 393 | Salt tolerance | 25, 31 |
| Intraspecific variation | 195 | Orientation of cell division | 489 | <i>Salvia</i> | 1 |
| | | Ovule | 259 | Saxifragaceae | 265 |
| J | | | | Seasonal variation | 321 |
| Janzen-Connell model | 179 | P | | Sect. <i>Remotiflorae</i> | 77 |
| | | Paraxonemal body | 421 | Seed germination | 151 |
| K | | Pea | 163 | Self-compatibility | 393 |
| Korea | 77 | <i>Pedicularis chamissonis</i> | 195 | SEM | 283 |
| | | <i>Pereskia</i> | 55 | Sequential blooming | 227 |
| L | | <i>Phaseolus vulgaris</i> | 357 | Sex allocation | 227 |
| <i>Larix</i> | 259 | Phloem reactivation | 37 | Sex pheromone | 463 |
| Leaf extract | 485 | Photoconversion | 109 | Signal sequence | 65 |
| Leaf phenology | 179 | Photomorphogenesis | 141, 489 | Signal transduction | 123, 131 |
| Leguminosae | 339 | Photomorphogenic mutants | 141 | Size of genome | 15 |
| Light environment | 179 | Photosynthesis | 299 | Soluble sugars | 347 |
| Light regulation | 123 | Phylogenetic tree | 15, 187 | Soybean | 305 |
| Light responsive element | 131 | Phylogeny | 469 | Spatial pattern | 321 |
| Light-dark cycle | 449 | Phylogeography | 195 | Speciation | 339 |
| Liliaceae (or Trilliaceae) | 379, 443 | Phytochrome | 109, 123, 299, 495 | Spore mass | 383 |
| Localization | 65 | Phytochrome (action dichroism) | 363 | Spores | 283 |
| Low fluence response | 151 | Phytochrome mutants | 151 | Sporogenesis | 93 |
| Lumazine | 383 | <i>Pittosporum</i> | 455 | Staining | 305 |
| Lumogallion | 305 | Plant hormones | 357 | Starch | 347 |
| | | Plasma-membrane H ⁺ pump | 299 | Stimulant | 485 |
| M | | Plastid genome | 235 | Structure and function (phytochrome) | |
| <i>Magnolia</i> | 37 | Podostemaceae | 87 | | 109 |
| Maize chromosomes | 417 | Pollen | 259, 283 | Sugar | 357 |
| Male fitness | 227 | Pollen tube branching | 411 | | |
| Mangrove | 25, 31 | Pollination | 275 | T | |
| <i>matK</i> | 265 | Pollination mechanisms | 329 | <i>T. kamtschaticum</i> | 443 |
| <i>matK</i> gene sequences | 329 | Population genetic structure | 209 | Theaceae | 45 |
| McFISH | 371 | Potassium | 31 | Threatened plant | 321 |
| Meiosis | 93 | Preprophase band | 489 | Tomato (<i>Lycopersicon esculentum</i> Mill.) | |
| Microbeam irradiation | 123 | Protandry | 227 | | 141 |
| Micropylar canal | 259 | Protoplast-release-inducing protein | | Transcription | 131, 463 |
| Microsite light availability | 321 | (PR-IP) | 463 | Transgenic plants | 109 |
| Microtubules | 93 | Pterin | 383 | Transroot osmosis | 435 |
| Mitochondria | 65 | Pterins | 421 | <i>Trillium apetalon</i> | 443 |
| Mitosis | 93 | | | <i>Trillium undulatum</i> | 379 |
| Molecular Phylogeny | | Q | | Tropical rain forest | 179 |
| | 87, 171, 195, 247, 329, 405 | <i>Quercus</i> | 37 | <i>Ty3/gypsy</i> | 495 |
| Molecular systematics | 265 | <i>Quercus serrata</i> | 7 | | |
| Moran's <i>I</i> | 209 | | | U | |
| Morphogenesis | 55 | R | | Ullungdo Is. | 77 |
| Mutant | 163 | Radish hypocotyl | 317 | Ulmaceae | 171 |
| | | RAPD | 187 | Urticales | 171 |

INDEX OF KEY WORDS

Journal of Plant Research

(Formerly : THE BOTANICAL MAGAZINE, TOKYO)

Vol. 110

| | | | | | |
|------------------------------------|---------|---|-------------|---------------------------------|----------|
| A | | cAMP | 501 | Division polarity | 489 |
| <i>Abies mariesii</i> | 219 | Campanian | 283 | DNA binding protein | 131 |
| Action spectrum | 151 | Campanulaceae | 77 | DNA synthesis | 1 |
| Actomyosin | 299 | Carboxy-terminal deletion (phytochrome) | 109 | DNA topoisomerase II | 65 |
| Adaptive radiation | 455 | Cdc2 kinase | 81 | Domain structure (phytochrome) | 109 |
| <i>Adenophora erecta</i> | 77 | Cell culture | 25, 31 | E | |
| <i>Adiantum</i> | 495 | Cell cycle | 81 | <i>Euglena gracilis</i> | 421 |
| Adventitious bud | 387 | Cell wall | 163 | <i>Eupatorium makinoi</i> | 247 |
| Allelopathy | 1 | Cell wall extensibility | 311 | Evaporation | 317 |
| Allocation of net production | 7 | Cell wall polysaccharide | 311 | Evolution | 55, 93 |
| Allozyme | 219 | Cellular slime mold | 383 | F | |
| Aluminum | 305 | Celtidaceae | 171 | Far East | 339 |
| Amphiploid | 371 | <i>Ceratodon purpureus</i> | 363 | Fatty acids | 347 |
| α -Amylase | 357 | cGMP | 501 | Fern | 495 |
| α -Amylase activity | 347 | <i>Chara</i> | 317 | Fertilization | 411 |
| Anatomy | 55 | Chemotaxis | 501 | Ferulic acid | 311 |
| Androecium | 45 | Chloroplast DNA | 195 | Flavins | 421 |
| Andromonoecy | 227 | Chloroplast movement | 363 | Flavonoids | 275 |
| Anthocyanin | 141 | Chromosome number | 15 | Flavonol glycosides | 379, 443 |
| Anthocyanins | 275 | <i>Chrysosplenium</i> | 265 | Flax | 387 |
| Apical dominance | 387 | 1, 8-cineole | 1 | Flower visitors | 393 |
| Aquatic plants | 87 | Circadian rhythm | 449 | Flowering phenology | 227 |
| <i>Arabidopsis himalaica</i> | 15 | <i>cis</i> -acting element | 131 | Fossil | 283 |
| <i>ARET-1</i> | 495 | Cis-element | 463 | French bean | 357 |
| <i>Astasia longa</i> | 421 | <i>Closterium</i> | 463 | G | |
| <i>atpB-rbcL</i> intergenic spacer | 469 | Cold-regulation | 405 | G2/M transition | 81 |
| Auxin | 37, 387 | Coleoptile | 311 | Geminivirus | 247 |
| B | | Confocal laser microscope | 305 | Gene flow | 209 |
| Barley root | 435 | Conidiation | 449 | Genetic cline | 219 |
| <i>Biophytum sensitivum</i> | 485 | Conifer | 259 | Genetic diversity | 209, 247 |
| Blue light photoreceptor | 363 | 4-CPPU | 25 | Genetic variation | 219 |
| Blue-light reception | 421 | Crassulaceae | 87 | Genomic DNA | 463 |
| Bonin Islands | 455 | Cretaceous | 283 | Genomic reorganization | 371 |
| <i>Brachyscome</i> | 371 | <i>Cyanidioschyzon merolae</i> | 235 | Gondwana | 469 |
| Branch diameter distribution | 7 | <i>Cyanidium caldarium</i> | 235 | Gravitropism | 163 |
| Branch sampling | 7 | Cyanobacterium | 405 | Guard mother cell | 489 |
| Branching | 363 | Cytokinesis | 93, 501 | H | |
| <i>Brassica campestris</i> | 1 | Cytoplasmic streaming | 299 | <i>Helianthus annuus</i> | 347 |
| <i>Bruguiera</i> | 25, 31 | Cytoskeleton | 501 | <i>Hemerocallis hakuunensis</i> | 209 |
| C | | D | | Heterochromatin | 417 |
| Cactaceae | 55 | 2, 4-D | 25 | HgCl ₂ | 317, 435 |
| Calcium | 163 | Decapitation | 387 | High-resolution | 417 |
| Calcium ion | 501 | Deciduous forest | 321 | Himalaya | 15 |
| Calcium ion (Ca ²⁺) | 299 | Development | 55, 81 | HKG-banding | 417 |
| Callose | 37 | <i>Dictyostelium discoideum</i> | 65, 81, 383 | Host-parasite interaction | 247 |
| Callus | 357 | Diferulic acid | 311 | | |
| <i>Camellia</i> | 45 | Dilleniidae | 45 | | |

| | | | | | |
|-------------------------|--------|--------------------|-------------------|---------------------------|----------|
| Shida, Yuko | 443 | Takasaki, Nagisa | 443 | Wakabayashi, Kazuyuki | 311 |
| Shimizu, Tatemi | 195 | Takaso, Tokushiro | 259 | Wakabayashi, Michio | 265 |
| Shimmen, Teruo | 25 | Tanaka, Norio | 329 | Washitani, Izumi | 321 |
| Shinomura, Tomoko | 151 | Tanaka, Yoshimasa | 65 | Washitani-Nemoto, Setsuko | 25, 31 |
| Shiuchi, Toshiaki | 87 | Tang, Yanghong | 321 | Watanabe, Kuniaki | 371 |
| Sibaoka, Takao | 485 | Tazawa, Masashi | 317, 435 | Watano, Yasuyuki | 195 |
| Siripatanadilok, Somkid | 25, 31 | Tobe, Hiroshi | 171 | | |
| Śniezko, Renata | 411 | Tsuda, Mitsuya | 469 | Y | |
| Soejima, Akiko | 455 | Tsukaya, Hirokazu | 15 | Yahara, Shoji | 379, 443 |
| Sugiyama, Mitsuko | 45 | Tsumura, Yoshihiko | 219 | Yahara, Tetsukazu | 227, 247 |
| Suyama, Yoshihisa | 219 | | | Yamada, Toshihiro | 179 |
| Suzuki, Eizi | 179 | U | | Yamamoto, Kotaro T. | 107 |
| Suzuki, Takeshi | 1 | Uchiumi, Akira | 305 | Yamauchi, Daisuke | 357 |
| | | Uchiyama, Saburo | 383 | Yokoyama, Jun | 15 |
| T | | Ueda, Kunihiko | 87, 171, 195, 235 | Yoshitama, Kunijiro | 379, 443 |
| Takagi, Shingo | 299 | Urushihara, Hideko | 65 | Yu, Yung-Luen | 187 |
| Takahashi, Hideyuki | 163 | | | Yumura, Shigehiko | 501 |
| Takahashi, Masamichi | 283 | W | | | |
| Takahashi, Yayoi | 7 | Wada, Masamitsu | 363, 495 | | |

AUTHOR INDEX

Journal of Plant Research

(Formerly : THE BOTANICAL MAGAZINE, TOKYO)

Vol. 110

| | | | | | |
|-----------------------------|-----|------------------------|------------|-----------------------|---------------|
| A | | Iwatsuki, Kunio | 15 | Murata, Jin | 265, 329 |
| Adachi, Junko | 371 | | | Murata, Norio | 405 |
| Aloni, Roni | 37 | K | | N | |
| Arakane, Tohru | 81 | Kagawa, Takatoshi | 363 | Nagai, Shin-ichi | 383 |
| B | | Kamada, Hiroshi | 387 | Nagatani, Akira | 123 |
| Bernardello, Gabriel | 393 | Kamisaka, Seiichiro | 311 | Nakanishi, Tomoko M. | 305 |
| Brown, Roy C. | 93 | Kamiya, Yuji | 463 | Nakano, Aiko | 87 |
| C | | Kanegae, Takeshi | 495 | Nakashima, Hideaki | 449 |
| Carvalho, Carlos Roberto de | 417 | Kang, Soon Suk | 209 | Nakashima, Susumu | 435 |
| Chambost, Jean-Pierre | 347 | Kataoka, Tatsuhiko | 305 | Nakashizuka, Tohru | 7 |
| Chang, Bing | 449 | Kawaguchi, Hideyuki | 7 | Nakazawa, Miki | 109 |
| Chang, Chin-Sung | 275 | Kawazu, Tamotsu | 1 | Nakazawa, Miyuki | 265 |
| Choi, Byoung-Hee | 339 | Kazama, Haruko | 489 | Nishiyama, Yoshitaka | 405 |
| Chua, Nam-Hai | 131 | Kendrick, Richard E. | 141 | Nozue, Kazunari | 495 |
| Chung, Myong Gi | 209 | Kerckhoffs, L. Huub J. | 141 | O | |
| D | | Kim, Jae-Whune | 357 | Ohba, Kihachiro | 219 |
| Darbelley, Nicole | 347 | Kim, Joo-Hwan | 339 | Ohkuma, Eiji | 435 |
| Doi, Yoshimichi | 469 | Kim, Sangtae | 77 | Ohmido, Nobuko | 371 |
| E | | Koitabashi, Ritsuko | 1 | Ohshita, Sanae | 247 |
| Endo, Bunshiro | 463 | Komori, Kayoko | 65 | Ohta, Niji | 235 |
| F | | Konuma, Akihiro | 227 | Okazaki, Yoshiji | 317 |
| Fujii, Noriyuki | 195 | Kosuge, Keiko | 171, 371 | Okubo, Hirobumi | 87 |
| Fujii, Tadashi | 463 | Koyama, Hiroshige | 469 | Ono, Mikio | 265, 455, 469 |
| Fukui, Kiichi | 371 | Kuroiwa, Haruko | 1, 15 | Ooi, Kazuyuki | 247 |
| G | | Kuroiwa, Tsuneyoshi | 1, 15, 235 | Oshima, Kazunobu | 321 |
| Galetto, Leonardo | 393 | L | | Owens, John N. | 259 |
| Galland, Paul | 421 | Lamparter, Tilman | 363 | Oyamada, Tsuyoshi | 379, 443 |
| Geiß, Dieter | 421 | Landrum, James V. | 55 | P | |
| H | | Lee, Joongku | 77 | Pavia, Andre | 347 |
| Hanyuda, Takeaki | 87 | Lee, Sangtae | 77 | Peterson, Carol A. | 37 |
| Harada, Hiroshi | 387 | Lemmon, Betty E. | 93 | R | |
| Hartmann, Elmar | 363 | Lin, Tsai-Yun | 187 | Razafindramboa, Njara | 347 |
| Hiratsuka, Kazuyuki | 131 | M | | Rivera, Guillermo L. | 393 |
| Hoson, Takayuki | 311 | Maeda, Yasuo | 81 | S | |
| Hotta, Mitsuru | 87 | Manabe, Katsushi | 109 | Sakai, Atsushi | 1 |
| I | | Maruo, Fumiaki | 65 | Sakano, Katsuhiko | 25 |
| Ikeda, Hiroshi | 15 | Maruyama, Keizo | 383 | Saraiva, Luiz Sergio | 417 |
| Ishii, Izumi | 247 | Maruyama, Kyonoshin | 405 | Sato, Naoki | 235, 405 |
| Ishikawa, Keiko | 387 | Matsumoto, Satoshi | 305 | Sekimoto, Hiroyuki | 463 |
| Ito, Motomi | 455 | Mauseth, James D. | 55 | Senger, Horst | 421 |
| | | Mimura, Mari | 25, 31 | Seo, Akihiro | 87 |
| | | Mimura, Tetsuro | 25, 31 | Setoguchi, Hiroaki | 329, 469 |
| | | Minamikawa, Takao | 357 | Shibasaka, Mineo | 435 |
| | | Mineyuki, Yoshinobu | 489 | | |
| | | Mori, Maiko | 305 | | |
| | | Morio, Takahiro | 65 | | |

| | |
|--|-----|
| Galetto, L., Bernardello, G. and Rivera, G.L. : Nectar, Nectaries, Flower Visitors, and Breeding System in Five Terrestrial Orchidaceae from Central Argentina | 393 |
| Sato, N., Maruyama, K., Nishiyama, Y. and Murata, N. : Identification of a Cold-Regulated RNA-Binding Protein from the Marine Cyanobacterium <i>Synechococcus</i> sp. PCC7002 | 405 |
| Śnieżko, R. : Postulated Interaction between Branching Pollen Tubes and Ovules in <i>Oenothera hookeri</i> de Vries (Onagraceae) | 411 |
| Carvalho, C.R. and Saraiva, L.S. : High-Resolution HKG-Banding in Maize Mitotic Chromosomes | 417 |
| Geiß, D., Senger, H. and Galland, P. : Pigments Associated with the Flagellum of <i>Euglena gracilis</i> | 421 |
| Tazawa, M., Ohkuma, E., Shibasaka, M. and Nakashima, S. : Mercurial-Sensitive Water Transport in Barley Roots | 435 |
| Yoshitama, K., Shida, Y., Oyamada, T., Takasaki, N. and Yahara, S. : Flavonol Glycosides in the Leaves of <i>Trillium apetalon</i> Makino and <i>T. kamtschaticum</i> Pallas | 443 |
| Chang, B. and Nakashima, H. : Effects of Light-Dark Cycles on the Circadian Conidiation Rhythm in <i>Neurospora crassa</i> | 449 |
| Ito, M., Soejima, A. and Ono, M. : Allozyme Diversity of <i>Pittosporum</i> (Pittosporaceae) on the Bonin (Ogasawara) Islands | 455 |
| Endo, B., Fujii, T., Kamiya, Y. and Sekimoto, H. : Analysis of Genomic Sequences Encoding a Sex Pheromone from the <i>Closterium peracerosum-strigosum-littorale</i> Complex | 463 |
| Setoguchi, H., Ono, M., Doi, Y., Koyama, H. and Tsuda, M. : Molecular Phylogeny of <i>Nothofagus</i> (Nothofagaceae) Based on the <i>atpB-rbcL</i> Intergenic Spacer of the Chloroplast DNA | 469 |
| SHORT COMMUNICATION | |
| Sibaoka, T. : Application of Leaf Extract Causes Repetitive Action Potentials in <i>Biophytum sensitivum</i> | 485 |
| Kazama, H. and Mineyuki, Y. : Alteration of Division Polarity and Preprophase Band Orientation in Stomatogenesis by Light | 489 |
| Nozue, K., Kanegae, T. and Wada, M. : A Full Length <i>Ty3/gypsy</i> -Type Retrotransposon in the Fern <i>Adiantum</i> | 495 |
| INVITED ARTICLE | |
| Yumura, S. : How Does Myosin II Localize within a <i>Dictyostelium</i> Cell ? | 501 |